

## WHAT IS CLAIMED IS:

1. A method of enhancing a biochemical reaction,  
comprising:

5 placing reactant(s) in a medium for said biochemical  
reaction into a reaction vessel, wherein said reaction vessel comprises  
a device for enhancing said biochemical reaction, said device further  
comprising means for applying energy;

applying energy to said reactant(s) or to said medium or to  
10 a combination thereof;

altering a molecular state of said reactant(s) upon  
application of energy thereby increasing an energy state of said altered  
reactant(s); and

increasing formation of at least one biochemical product of  
15 the biochemical reaction upon increase of the energy state of said  
reactant(s) thereby enhancing the biochemical reaction.

2. The method of claim 1, further comprising:

20 providing an enzymatic catalyst to said reaction vessel; and  
stabilizing said reactant(s) at said increased energy state.

3. The method of claim 1, wherein the biochemical reaction is a polymerase chain reaction.

5 4. The method of claim 1, wherein the biochemical reaction is a enzyme linked immunoassay reaction.

5. The method of claim 1, wherein said energy is  
10 electromagnetic energy or mechanical energy.

6. The method of claim 5, wherein said electromagnetic energy is generated by a source which provides radiant energy with a  
15 wavelength from about 200 nm to about 20,000 nm.

7. The method of claim 5, wherein said electromagnetic energy is radiofrequency or microwave.

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8. The method of claim 5, wherein said mechanical energy is a pressure wave.

5 9. The method of claim 1, wherein said molecular state is temperature, molecular vibration, molecular rotation, or a combination thereof.

10 10. The method of claim 1, wherein altering said molecular state alters molecular configuration of said reactant(s).

11. The method of claim 10, wherein said altered  
15 molecular configuration is a transition state of said reactant(s).

12. A method of increasing the rate at which a group of molecules reaches a different molecular configuration from initial  
20 configuration, comprising:

providing a means of applying energy to said molecules  
having the initial molecular configuration;

applying energy to said molecules; and

increasing a vibrational or rotational state of said molecules  
5 upon application of energy thereto thereby increasing the rate at which  
the group of said molecules reaches a different molecular  
configuration.

10 13. The method of claim 12, wherein said molecules are  
in a reaction vessel comprising a device, said device further comprising  
said means of applying energy.

15 14. The method of claim 12, wherein said molecules  
comprise a membrane or other tissue barrier.

20 15. The method of claim 12, wherein said energy is  
electromagnetic energy or mechanical energy.

16. The method of claim 15, wherein said electromagnetic energy is radiofrequency energy or microwave energy.

5 17. The method of claim 15, wherein said electromagnetic energy is generated by a source which provides radiant energy with a wavelength from about 200 nm to about 20,000 nm.

10 18. The method of claim 15, wherein said mechanical energy is a pressure wave.

15 19. The method of claim 12, wherein said different molecular configuration occurs at a transition state in a biochemical reaction.

20 20. The method of claim 19, wherein said biochemical reaction is catalyzed via an enzyme.